

**Date of RFP**  
**11/2/11**

**New Jersey Department of Transportation**  
**Bureau of Research**  
**RESEARCH PROJECT**  
**Request for Proposals**  
**2012 Program**

**Closing Date**  
**12/15/11**

**Offshore Wind Development Research**

**Project No. 2012-04**

(Proposals must be prepared in accordance with NJDOT's *Information and Instructions for Preparing Proposals*. Please visit:

<http://www.state.nj.us/transportation/refdata/research/pdf/techpropresproj.pdf>

*Revised Proposal Evaluation Forms are available for your information on the website.)*

Proposals will be based on the merit of the information contained in the proposal. Budgets will be evaluated separately. Please place three (3) copies of the budget for this project in a separate sealed envelope.

**1. RESEARCH PROBLEM STATEMENT, BACKGROUND AND OBJECTIVES**

New Jersey's 2011 Energy Master Plan energy goal is to procure 22.5% of its power from renewable resources by 2021. Offshore Wind (OSW) development is a significant goal of the current Administration and the current policy framework for OSW development is fixed by the Energy Master Plan (EMP) and the Offshore Wind Economic Development Act (OWEDA). The OWEDA called for at least 1,100 MW of Offshore Wind generations to be subsidized by an Offshore Wind Renewable Energy Certificate (OREC) program, proving New Jersey is serious about OSW production.

Geographically bordering on the Atlantic Ocean, the State of New Jersey presents a total of 130 miles of coastline. An area is identified off the coast between Point Pleasant Beach (North) and North Wildwood (South) to support New Jersey's OSW program. This zone appears best for its wind energy capture and proximity with port facilities. Eleven lease blocks are slated for OSW development in this zone. Developers have expressed an interest in the installation of over 12,000 MW and as a result a competitive bidding process will take place in 2012.

The overarching goal of this research is to provide information and recommendations that ensure that the maritime aspects, both vessel and port interface, of OSW development do not impede the state's desire to make a significant contribution to the achievement of the green electricity production objectives set by the federal government and New Jersey's 2011 Energy Master Plan. Research should be specific to vessel requirements, characteristics needs and costs, and, the land-use/wharf-side aspects of maritime port facilities as they relate to OSW industry development. Research should not include OSW siting, a discussion of overall costs/benefits and/or environmental considerations.

The objective of this research is to identify the critical maritime components of OSW industry development for installation, construction, operation and maintenance of OSW.

The primary aspects of this research are:

1. Identify vessel types, needs and operating characteristics through all phases of OSW development. Identify regulatory or legislative requirements and/or other road blocks to the use of particular vessels. Identify competitive advantages and disadvantages of vessel acquisition, lease, construction or other alternatives. Propose solutions and recommendations that best position the state of New Jersey to be the

national leader in OSW development, including potential inter-state or cooperative endeavors. Financial aspects and considerations of vessel acquisition (in order of magnitude) should be presented.

2. Propose a port/OSW industry interface strategy for short, mid-, and long-term industry development. In general terms, identify the maritime port life-cycle requirements for installation, construction, operation and maintenance based on geographic factors, potential manufacturing, labor pool, known port development and the potential for multi-use development at New Jersey's smaller East coast ports and marinas. A hypothetical maritime facility feasible use timeline over a 20 year horizon should be presented.

NJDOT Office of Maritime Resources will facilitate and coordinate interaction with the Department of Environmental Protection (DEP) Office of EGGE, the NJ BPU, other state/Federal agencies, OSW businesses, port officials, marina owner/operators and related interest groups. A review of European and international industry standards, lessons-learned and BMPs should be incorporated into this research.

## **2. TASKS**

[Provide a listing of appropriate general tasks divided into phases based on types of work (e.g., laboratory, field) or by year (e.g., year 1, year 2) or other appropriate milestones]

*The NJDOT is seeking the insight of proposal responders on how best to achieve the research objectives. Proposers are expected to describe a research effort that can realistically be accomplished as expeditiously as possible. Proposals must present the proposers' current thinking in sufficient detail to demonstrate their understanding of the problem and the soundness of their approach for conducting the required research.*

### **PHASE I – Literature Search**

Conduct a literature search of the current state of the practice.

After the award of the project, a more comprehensive literature search should be conducted. At the completion of this literature search, the PI will make a presentation to the Research Project Selection and Implementation Panel to discuss their findings and to discuss the appropriate research approach.

### **PHASE II – Research Approach and Anticipated Results**

Clear description of how you will solve the problem and implement anticipated findings. Work may be divided into phases (e.g., Laboratory, Field or Year 1, Year 2) as necessary to clarify tasks. *Exit Criteria* must be developed during this phase.

## **3. IMPLEMENTATION AND TRAINING PLAN**

The PI must meet with the Research Project Selection and Implementation Panel (RPSIP) and other NJDOT units to present the findings and as appropriate train these personnel in the use the project results. The PI will develop an implementation plan as per the guidelines provided by NJDOT Research Bureau.

## **4. DELIVERABLES:**

[List of minimum deliverables necessary to complete the project]

- Presentation of Summary of Literature Search Results
- Discussion to Support and Refine the Project Tasks
- Project work plan.
- Technical Memorandum on the survey results
- Technical memorandum on the measures that are working or not working
- Technical memorandum on actions taken

- Interim Status reports suitable for Senior Leadership if required
- Quarterly Reports and Final report with appropriate tables, graphs and charts in hard copy version, PDF file format, Word, and on CD ROM. Two copies plus one per RSIP member of each presentation, technical memorandum, draft final report and Final Report (10 copies). The Final Report and Tech Brief are due three (3) months before the end date of the project to allow time for review by the Research Project Selection and Implementation Panel. Final Acceptance will be granted upon receipt of ten copies of the approved final report.

**5. CONTRACT TIME:**

The PI must provide the anticipated research study duration based on the proposed tasks. Consideration should be given to potential impediments so that adjustments are incorporated into the schedule minimizing the need for time extensions.

**6. CONTACTS:**

Upon request, and subject to staff availability, a meeting may be scheduled with interested parties after the RFP's are distributed to refine the objectives and deliverables and to promote a better understanding of the research needs. Questions on this topic **shall not** be directed to any Research Project Manager, Research Customer, or any other NJDOT person. All questions and answers may be addressed during this meeting (if conducted) or through e-mail. Visit the Bureau of Research website for information about the Bureau of Research. Contact Camille Crichton-Sumners before November 14, 2011 ([Camille.CrichtonSumners@dot.state.nj.us](mailto:Camille.CrichtonSumners@dot.state.nj.us)) with RFP related questions or to express your interest in requesting or participating in a pre-proposal meeting.

**7. DEADLINE**

**Proposals (7 single-bound copies) are due at the NJDOT Bureau of Research  
No later than 4:00 PM 12/15/11**

**Authorization to Begin Work:** -- To be negotiated.

**8. DELIVERY INSTRUCTIONS:**

**For private, paid messenger services such as Federal Express, DHL, UPS, etc., or for hand-carried deliveries:**

2012 PROPOSAL-NJDOT  
New Jersey Department of Transportation  
Bureau of Research  
1035 Parkway Avenue  
Trenton, New Jersey 08625-0600

**For U.S. Postal Service mail:**

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